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328613(28)

B. E. (Sixth Semester) Examination April-May 2020

(Old Scheme)

ADVANCED MICROPROCESSOR & INTERFACING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *Attempt all questions. Part (a) of each question is compulsory and carries 2 marks. Attempt any* ***two*** *parts from (b), (c) and (d) of each question which carry 7 marks each.*

Unit-I

1. (a) If DS = 3458 H and SI = 13 DCH then calculate the physical address. 2

(b) Draw and explain the flag register of 8086. 7

(c) Explain the significance of queue in 8086 micro-processor with diagram. Why is the 8086 queue only six byte long? 7

(d) Explain different Addressing modes of 8086 with examples. 7

Unit-II

2. (a) What do you mean by Maximum Mode? 2

(b) Draw the interrupt vector table of 8086. Explain various type of interrupt of 8086. 7

(c) Explain minimum mode configuration with read and write timing diagram. 7

(d) Design an interface between 8086 and two chips of 16 k × 8 EPROM and two chips of 32 × 8 RAM. RAM address should be 0000H. 7

Unit-III

3. (a) Explain $C/\overline{D}$ pin of 8251 A. 2

(b) Draw and explain architecture of 8257. 7

(c) Explain the following terms in relation to 8259 : 7

(i) EOI

(ii) Automatic Rotation

(iii) Automatic EOI

(iv) Specific Rotation

(d) Explain different operating modes of 8253. 7

Unit-IV

4. (a) Why the instruction queue is 16 byte long in 80386? 2

(b) Explain RISC and CISC processor in detail. 7

(c) What are difference between real, protected and virtual mode of 80386? 7

(d) What is Paging? Discuss the paging mechanism of 80386 in detail. 7

Unit-V

5. (a) Define Multiprocessor System. 2

(b) Draw and explain internal architecture of 8087. 7

(c) Write a procedure to calculate the volume of a sphere using MASM syntax. 7

(d) Explain closely coupled and lossely coupled system in detail. 7